

# RED OAK

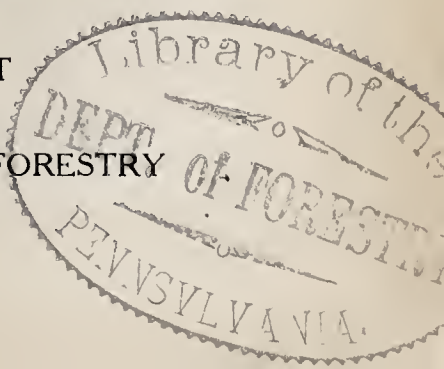


Photo by Courtesy U. S. Forest Service.

PLANTED OAK FOREST

MARYLAND STATE BOARD OF FORESTRY

BALTIMORE, MARYLAND.



## RED OAK.

(*Quercus borealis* var. *maxima*)

Red oak is one of the fastest growing hardwood trees found in the forests of Maryland. It attains large size, is widely distributed, and possesses a most useful wood. The wood, while not so valuable as that of white oak, is proving itself to be very nearly its equal in all qualities, except that of durability, which may be overcome by preservative treatment. Since oak is, probably, more widely used, and in greater demand than any other hardwood, and since red oak is the most rapid growing of the oaks, it is evident that this species is destined to play an exceedingly important part in the future forests.

### Range.

This tree is found in all parts of the State, most abundantly in the mountain portions, and to a considerable extent in the Piedmont Plateau section. It is seldom found in pure stands, being generally associated with white oak, hickory, and tulip poplar.

### Characteristics.

In the forest the red oak is tall, straight, slightly tapering, clean of limbs, and bears a small, narrow crown; while in the open, the trunk is short and the crown is broad and symmetrical. The leaves are quite regularly lobed, the lobes having the characteristic bristle-pointed teeth. The petiole of the leaf is generally tinged with red on the upper side. The bark on old trees is thick, broken up by shallow fissures into regular, continuous and distinctly flat topped ridges. On

young trees, the bark is thin, smooth, and gray to brown in color. The fruit (seed) is an acorn which requires two years to mature. The cup is shallow, covering only the base of the nut. The tree is light demanding, except when very young. It is easily confused with other oaks, but can be distinguished by the shiny under-surface of the leaves, the reddish petiole, the large flat-cupped acorn, and the distinctive flat-ridged bark.

### Soil And Moisture.

The best growth of the red oak is attained on porous sandy, or gravelly-clay soils of the bottom lands and lower slopes. The soils should be well drained. The tree avoids swampy soils, and slopes and ridges that are dry. In Maryland, sites should be selected that are moist and cool. It generally makes a good growth in mixture with other oaks, basswood, elm, chestnut and the hickories.

### Enemies.

Red oak is remarkably free from serious insect and fungus damage. Older trees are often attacked by a small borer, which makes "wormy" wood.

It is, particularly, susceptible to fire damage, due to the thin bark, especially of younger trees. Fire lines and co-operation among woodland owners are the best means of fire prevention.

### Uses Of The Wood.

The wood of the red oak is heavy, hard, coarse-grained and strong. It is not very durable in contact with the ground, but this objection is overcome by the use of preservatives. Red oak is used, largely, for furniture, interior finish, gen-

eral lumber and construction material, and railroad and trolley ties. It, also, is an excellent fuel wood, which with its other good qualities, makes it especially desirable as a tree to be encouraged in the farm woodland.

### **Suitability For Planting.**

Red oak, because of its rapid growth, useful wood, size and hardiness, takes high rank as a tree suitable for forest planting. It can be easily propagated by planting the acorns, thereby saving the nursery costs of growing seedlings. The species is recommended for planting in all parts of Maryland, except on the Eastern Shore, and the lower counties of Southern Maryland. The best sites are on porous, sandy, or gravelly-clay soils in Western Maryland and in the Piedmont Plateau section. It is suitable for planting on abandoned fields that have become exhausted by cultivation. It may be grown in pure stands, or planted in mixture with white pine, other oaks, or sugar maple.

### **Yields And Returns.**

No data is available from planted red oak in Maryland, but results in other States indicate profitable returns from plantations of this species. Under good conditions, as on bottom lands and lower slopes, red oak will reach a height of 35 to 40 feet at an age of 20 years, with a diameter of 3 to 5 inches; in 40 years, it will attain a height of 50 to 60 feet, and a diameter of 10 to 12 inches.

NOTE:—The State Board of Forestry maintains a forest nursery where trees suitable for forest planting are grown and distributed at cost to landowners of the State. Full particulars may be obtained upon application.